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EXAMINER

TIEU, BINH KIEN

ART UNIT PAPER NUMBER

2643

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/397,414

Applicant(s)

WILLIAMS, H. ROSS

Examiner

BINH K. TIEU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 September 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, 8-11, 14, 16-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Freimanis et al. (U.S. Pat. #: 4,056,691).

Regarding claim 1, Freimanis et al. ("Freimanis") teaches an apparatus, as shown in figure 1, for interfacing customer premises equipment (i.e., telephone sets 110) with a telephone network (i.e., NETWORK 130 of telephone central office 100), comprising:

an interface (i.e., an line interface as shown in figure 2) coupled to the telephone network (i.e., to NTWK 130), the interface comprising a current source (i.e., power supply source 210 in figure 2, or also shown in figure 3) provides a constant current to the customer premises equipment when a line impedance of the telephone network varies in a predetermined range when the customer premises equipment is off-hook (i.e., off-hook impedance, on-hook impedance, etc., col.6, line 58 – col.14; and col.7, lines 34-49); and

a tip conductor and a ring conductor, both the tip line and the ring conductors are coupled to the interface (see telephone loop 115 in figures 1 and 2).

Regarding claim 3, note that the telephone central office 100 as shown in figure 1 as representing a portion of POTS network.

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Regarding claim 4, note the transistor 320 as a FET shown in figure 3, col.7, lines 5-14.

Regarding claim 5, note col.7, lines 19-20.

Regarding claim 8, note the RC circuit in col.6, line 58 – col.7, line 33.

Regarding claim 9, Freimanis teaches an apparatus, as shown in figure 1, coupled to a telephone network (i.e., NETWORK 130 of telephone central office 100), comprising:

a receiver (i.e., telephone set 110 as shown in figure 1);

an interface coupled to the receiver (i.e., an line interface as shown in figure 2) and the telephone network (i.e., to NTWK 130);

the interface comprising a current source (i.e., power supply source 210 in figure 2 or also shown in figure 3) provides a constant current to the receiver when a line impedance of the telephone network varies in a predetermined range when the customer premises equipment is off-hook (i.e., off-hook impedance, on-hook impedance, etc., col.6, line 58 – col.14; col.6, line 58 – col.14; and col.7, lines 34-49); and

a tip conductor and a ring conductor, both the tip line and the ring conductors are coupled to the interface (see telephone loop 115 in figures 1 and 2).

Regarding claim 10, note the transistor 320 as a FET shown in figure 3, col.7, lines 5-14.

Regarding claim 11, note that the telephone central office 100 as shown in figure 1 as representing a portion of POTS network.

Regarding claim 14, note col.5, lines 36-37.

Regarding claim 16, note col.7, lines 19-20.

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Regarding claim 17, Freimanis teaches a method of providing a constant current to an apparatus, such as the apparatus shown in figure 1, coupled to a telephone network (i.e., NETWORK 130 of telephone central office 100), comprising the steps of:

connecting the apparatus to a tip and a ring conductor (i.e., interface device 120 shown in figure 1 is connected to telephone loop 115);

taking the apparatus off-hook (i.e., the on-hook and off-hook state of the line 115, col.7, lines 34-36);

sinking a constant DC bias current while off-hook, where the DC bias current is independent of a load on the tip and the ring conductors (col.6, line 58 – col.14; col.6, line 58 – col.14; and col.7, lines 34-49).

Regarding claim 18, note that the telephone central office 100 as shown in figure 1 as representing a portion of POTS network.

Regarding claim 20, note col.7, lines 19-20.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 6, 12, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freimanis et al. (U.S. Pat. #: 4,056,691) in view of Seazhotz et al. (U.S. Pat. #: 5,737,706).

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Regarding claims 2 and 12, Freimanis teaches the telephone loops 115 connected subscriber premises equipment to line interface for voice communications purposes. It is also well-known to those skilled in the art to realize that such telephone loops 115 today are used for other services such as data call or modem call. Therefore, other interfaces or protocols are also used for such data transmissions. Such protocols included, for example, EIA/TIA-496-A interface between Data Circuit Terminating Equipment (DCE) and the PSTN provided in November 1989, or EIA/TIA-578 interface for asynchronous Facsimile DCE control standard, provided in May 1987, etc. However, Freimanis fails to teach such EIA/TIA-496-A interface. Seazholtz et al. (Seazhotz) teaches radio communication devices such as portable telephone set and a base station for data communications there between providing a plurality of different interface included EIA/TIA-496-A interface (col.23, line 66 – col.25, line 15) for handling a particular data communications.

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to incorporate the use of such EIA/TIA-496-A interface, as taught by Seazhotz, in view of Freimanis in order to provide necessary electrical interface criteria for modem data transmissions.

Regarding claims 6, 15 and 19, Seazhotz further teaches the telephone network is Centrex or PBX system (col.11, lines 13-23).

5. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freimanis et al. (U.S. Pat. #: 4,056,691) in view of Brahmin et al. (U.S. Pat. #: 5,790,656).

Regarding claim 7, Freimanis teaches the scanning technique for detecting on-hook/off-hook state of a communication line (see col.5, lines 1-39). Freimanis, however, fails to clearly

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teach an off-hook relay of the interface device. Rahamim et al. (Rahamim) teaches an Data Access Arrangement (DAA) with telephone interface comprising an off-hook relay 118 as shown in 2a for a purpose of coupling the DC holding circuit and the central office telephone line when a modem function is activated.

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to incorporate the use of the off-hook relay, as taught by Rahamim, in view of Freimanis in order to connect the subscriber premises equipment to the central office telephone line for communications.

Regarding claim 13, Rahamim further teaches limitations of the claim in col.3, lines 21-27.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Although the Derby et al. (US. Pat. #: 6,275,583), Schingh (U.S. Pat. #: 4,803,721), Ulrich (U.S. Pat. #: 4,803,719), Gradl et al. (U.S. Pat. #: 4,704,670), Brooks et al. (U.S. Pat. #: 4,679,232) and Chen et al. (US. Pat. #: 5,881,129) are not applied into this Office Action, they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned with a network interface comprising a current source providing a constant current to customer premises equipment when a line impedance of a telephone network varies in a predetermined range when the customer premises equipment is off-hook, as recited in the claimed invention.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh K. Tieu whose telephone number is (703) 305-3963 and E-mail address: [BINH.TIEU@USPTO.GOV](mailto:BINH.TIEU@USPTO.GOV).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz, can be reached on (703) 305-4708 and **IF PAPER HAS BEEN MISSED FROM THIS OFFICIAL ACTION PACKAGE, PLEASE CALL Customer Service at (703) 306-0377 FOR THE SUBSTITUTIONS OR COPIES.**

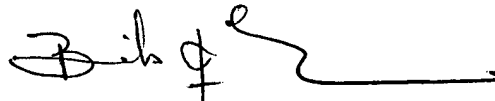
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Or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist, tel. No. 703-305-4700).



**BINH TIEU**  
**PRIMARY EXAMINER**

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Date: February 22, 2003